



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.                | CONFIRMATION NO. |
|--|-------------|----------------------|------------------------------------|------------------|
| 10/711,587   | 09/27/2004  | Bogdan Radu          | 05116 (LC 0171 PUS)                | 5586             |
| 28549  | 7590        | 03/20/2007           |                                    |                  |
| ARTZ & ARTZ, P.C.<br>28333 TELEGRAPH ROAD, SUITE 250<br>SOUTHFIELD, MI 48034 |             |                      | EXAMINER<br>BLANKENSHIP, GREGORY A |                  |
|  |             |                      | ART UNIT                           | PAPER NUMBER     |
|  |             |                      | 3612                               |                  |

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE  | DELIVERY MODE |
|--|------------|---------------|
| 3 MONTHS                               | 03/20/2007 | PAPER         |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/711,587

Applicant(s)

RADU ET AL.

Examiner

Greg Blankenship

Art Unit

3612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on amendment filed 1/8/2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 and 12-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 14 and 15 is/are allowed.
- 6) ☒ Claim(s) 1-9, 12, 13, 16 and 18-20 is/are rejected.
- 7) ☒ Claim(s) 17 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 9/27/04 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3, 5-8, 19, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heimnick et al. (4,619,478) in view of Bellasalma et al. (2002/0176317).

Heimnick et al. disclose an adjustable armrest system mounted within an interior of a vehicle, as shown in Figure 1. An armrest housing (14) has an armrest surface (18). Piston elements (44) are coupled to the armrest surface (18). In reference to claims 1 and 6, piston-actuating devices (40) are coupled to the piston elements (44). A controller (62) is coupled to the piston actuating devices (40) to adjust the position of the armrest surface (18). The pneumatic device inherently must have a valve between the piston element and the piston-actuating device to function as disclosed. In reference to claim 2, there are two piston elements, as shown in Figure 2. In reference to claim 3, the first piston element (44) and the second piston element (44) stabilize the armrest surface in at least one direction selected from fore, aft, left and right directions. In reference to claim 5, the piston element (44) independently adjusts the tilt of the armrest surface. In reference to claim 7, it is disclosed that pneumatic actuating devices may be used as the piston actuating devices on lines 42-48 of column 4. In reference to claim 8, the pneumatic actuating device inherently must have a fluid passage port to function as disclosed. In reference to claim 19, the position of the

Art Unit: 3612

armrest is adjusted by determining the current position of the armrest surface (18). Then, one determines the desired position of the armrest surface (18). The position of the armrest surface is adjusted in response to the current position and the desired position by actuating at least one piston element (44) and linearly translating the armrest surface (18) stabilizing element, the other element (44). There inherently must be a valve between the piston element and the piston-actuating device to function as disclosed. In reference to claim 20, when using a pneumatic actuating device, it is inherent that a fluid flows in the direction relative to the piston element selected from a piston fill direction and a piston evacuate direction. However, Heimnick et al. do not disclose the sequential valve.

Bellasalma et al. teach the use of a sequential valve to provide the desired flow of working fluid at the desired time.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to form the valve of Heimnick et al. as a sequential valve, as taught by Bellasalma et al., to provide the desired flow of air to the pneumatic actuating devices to move the armrest to the desired position.

3. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Heimnick et al. (4,619,478) and Bellasalma et al. (2002/0176317), as applied to claim 2.

Heimnick et al., as modified, do not disclose a third piston element.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add a third piston element to the adjustable armrest system of Heimnick et al., as modified, as an obvious duplication of parts to provide a redundant back-up.

Art Unit: 3612

4. Claims 9, 12, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Heimnick et al. (4,619,478) and Bellasalma et al. (2002/0176317), in view of Poertzgen et al. (5,154,264)

Heimnick et al., as modified, do not disclose the ports and valves.

Poertzgen et al. teach a pneumatic actuator that has two ports (8,20) allow for extension and retraction of the piston element (5,26). Valve (7) acts as both the supply valve and the evacuate valve to allow fluid to pass from one chamber (10) to another chamber (11).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the pneumatic actuator of Heimnick et al, as modified, with a pneumatic actuator taught by Poertzgen et al. to provide a reliable actuator that provides both extension and retraction of the piston element.

5. Claims 16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ramanujam (5,967,594) in view of Bellasalma et al. (2002/0176317).

Ramanujam discloses an adjustable armrest system for a vehicle comprising at least one armrest housing (28) mounted within the vehicle and having an armrest surface (32,34).

A fluid cell (60) has a plurality of internal chambers (62) coupled to the armrest surface, as disclosed on lines 24-25 of column 3. A plurality of stabilizing members (40) are coupled to the at least one armrest surface (32,34). A pump (70) is coupled to the plurality of chambers (62). A controller is coupled to the pump to adjust the attitude and position of the at least one armrest surface (32,34), as disclosed on lines 55-62 of column 3. A valve is indirectly disclosed as being coupled at the inlet (64) between the fluid cell (60) and the pump (70) on lines 39-42 of column 3. The valve is disclosed as a sealing mechanism with the ability to prevent leakage air during filling or while filled. The controller adjusts the position of the

Art Unit: 3612

armrest surface via the valve by controlling all the air sent from the pump through the valve to the fluid cell. In reference to claim 18, the stabilizing members (40) comprise a first stabilizer on one side of the fluid cell (60) and a second stabilizer on a different side of the fluid cell, as shown in Figure 3. However, Ramanujam does not disclose the claimed type of valve.

Bellasalma et al. teach the use of a sequential valve to provide the desired flow of working fluid at the desired time.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to form the valve of Bellasalma as a sequential valve, as taught by Bellasalma et al., to provide the desired flow of air to the fluid cell to move the armrest to the desired position.

#### *Allowable Subject Matter*

6. Claims 14 and 15 are allowed.
7. Claim 17 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### *Response to Arguments*

8. Applicant's arguments with respect to the pending claims have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Greg Blankenship whose telephone number is 571-272-6656.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Dayoan can be reached on 571-272-6659. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3612

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

gab

March 16, 2007

  
GREGORY BLANKENSHIP  
PATENT EXAMINER